**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, D.C. 20554**

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| In the Matter of | ) | |
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| New Part 4 of the Commission's | ) | |
| Rules Concerning Disruptions to | ) | ET Docket No. 04-35 |
| Communications | ) | |
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**COMMENTS OF SBC COMMUNICATIONS**

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## I. INTRODUCTION AND SUMMARY

SBC Communications Inc. ("SBC"), on behalf of itself and its subsidiaries, respectfully submits the following Comments in response to the *Notice of Proposed Rulemaking* in the above-captioned proceeding concerning disruption reporting requirements.[1] SBC appreciates the Commission's longstanding commitment to a secure and reliable national communications infrastructure. SBC agrees that "our Nation has become totally dependent on communications services that are now essential to the operation of virtually all government, business, and critical infrastructures throughout the United States as well as to our Nation's economy."[2] SBC, moreover, recognizes that, in order to fulfill its responsibilities to oversee the nation's communications infrastructure, the Commission must remain apprised of critical outages.

The Commission should also recognize, however, that SBC and other providers of communications services have every incentive to ensure on their own that their networks are as reliable as possible. To that end, they incorporate redundancy in their network planning, where feasible, and they work proactively and cooperatively with industry groups, such as the Alliance

[1] New Part 4 of the Commission's Rules Concerning Disruptions to Communications, ET Docket No. 04-35, *Notice Proposed Rulemaking,* 19 FCC Rcd 3373(2004)(*NPRM.).*

[2] *Id.* at ¶ 3.

for Telecommunications Industry Solutions (ATIS) and the Industry-Led Outage Reporting Initiative (ILORI), which provide a forum for experts to share technical and operational information, identify the root causes of network outages, and develop Best Practices to avoid them. Participation in these groups is broad and increasing. The Commission must tread carefully in this proceeding to ensure that its actions do not stifle the work of these groups or the cooperation that has enabled them to play a preeminent role in ensuring that the citizens of this country enjoy the best, most reliable communications infrastructure in the world.

The Commission also must ensure that outage reporting requirements do not impose undue financial or administrative burden on communications service providers and, in particular, that the benefits of such requirements outweigh the costs. Unfortunately, although some of the Commission's concerns with existing reporting requirements appear legitimate, many of the proposed changes to those requirements are highly problematic. First, they would dramatically increase the number of reportable incidents, leading to a commensurate increase in industry costs. Second, they incorporate unworkable standards – standards that not only fail to capture the true impact of an outage on customers, but actually present a misleading picture of that impact. Third, they are administratively infeasible. The goal of outage reporting should be to ensure that the Commission is timely apprised of critical outages; the *NPRM's* proposals are not properly tethered to that goal.

SBC is additionally concerned that the Commission's proposed rules do not sufficiently protect from public disclosure the information provided in outage reports. Outage reports may contain highly sensitive, critical infrastructure information. If that information falls into the wrong hands, it could be used as a basis for attacking our nation's communications infrastructure. To prevent this from occurring, the Commission should support the development

of a secure database created and maintained by an unbiased third party and restricted from public access.

In the comments that follow, SBC discusses in more detail these issues and the impact that the proposed requirements will have on SBC and the industry. Further, SBC presents alternative standards and mechanisms for outage reporting. SBC believes that these alternatives minimize unnecessary burdens on communications providers while allowing the Commission to perform its statutory responsibilities with respect to the nation's communications infrastructure. SBC strongly urges the Commission to adopt this alternative proposal.

## II. DISCUSSION

### A. The Proposed Common Metric is Flawed and Should be Revised

In the *NPRM,* the Commission proposes to modify its existing outage reporting requirements by establishing a new "common metric," which would apply to all communications providers (regardless of platform or technology), for determining when carriers must report disruptions of service. Specifically, the Commission proposes to replace the existing metric (which applies only to wireline carriers and requires reporting of outages that affect at least 30,000 customers for at least 30 minutes) with a sliding scale that focuses on "user minutes," which are defined as outage duration (in minutes) multiplied by the number of potentially affected end users.[3] The Commission proposes to require reports for outages that last at least 30 minutes, provided they affect at least 900,000 user minutes.[4]

The Commission justifies this proposal on the ground that its existing outage reporting requirements fail to identify significant network outages. That is so, the Commission asserts,

[3] The Commission proposes to define "users" as "assigned telephone numbers," which include both "assigned numbers" and "administrative numbers." *Id.* at ¶33. Administrative numbers are numbers used by telecommunications carriers to perform internal administrative or operational functions necessary to maintain reasonable quality of service standards. Assigned numbers are numbers working in the Public Switched Telephone Network under an agreement such as a contract of tariff at the request of specific end users or customers for their use, or numbers not yet working but having a customer service order pending. 47 C.F.R. § 52.15(f) (i), (iii).

[4] 900,000 user-minutes is the product of 30,000 users times 30 minutes. *Id.* at ¶22.

because, under the existing rules, a "customer" is defined as "a user purchasing telecommunications service from a common carrier,"[5] which means that a business customer with tens or even hundreds of individual lines would count as only one customer. And, by requiring carriers to report only outages that affect at least 30,000 customers, carriers need not account for outages that affect only a limited number of customers, but which are of significant duration.[6] The Commission asserts that the "user minutes" metric would remedy both deficiencies in the current model by providing a better assessment of the actual number of users affected by a network outage.[7]

SBC agrees with the Commission that the existing rules should be revised. SBC agrees, in particular, that the definition of "customer" and the absence of any reporting requirement for outages affecting fewer than 30,000 customers, irrespective of the duration of such outages, is problematic. SBC has grave concerns, however, with the alternative metric the Commission has proposed. First the new definition of "user minutes" greatly expands the potential number of reportable outages but fails to adequately asses customer impact. Second, the proposed change induration to a " sliding scale" is excessively burdensome, and renders difficult the quick determination of which outages are critical enough to be reportable.

**1. "Assigned Telephone Numbers" is a Poor Indicator of Customer Impact**

The number of "assigned telephone numbers" has little correlation to the number of customers or customer lines in use for a variety of reasons. First, Local Number Portability has made it very difficult to determine the number of telephone numbers active on any given office. In establishing number reporting categories for the Numbering Resource Utilization Forecast (NRUF) report, the Commission required the "donating carrier" to classify ported-out numbers as assigned numbers and, to avoid double-counting, the receiving carrier was not to classify these

[5] 47 C.F.R. § 63.100(a) (2).

[6] *Id.* at ¶¶21-22.

[7] *Id*. at ¶¶ 20-23.

numbers.[8] This means that on any given switch, a portion of the "assigned numbers" do not even belong to the carrier experiencing the outage and may not even "belong" to that switch. Further, some numbers on the switch may have been ported from another carrier and may experience the outage but would not be included in the assigned number count.

Second, carriers commonly assign groups of numbers (from 100 to 10,000) to large business and government customers with their own equipment (e.g., PBX or Centrex) and the activation of those numbers is then the customer's responsibility. The Commission has determined that as long as at least fifty (50%) of the numbers in a customer block are "working" at all times, the entire block may be considered assigned. Obviously, in those instances, the number of "assigned numbers" could be substantially higher than the actual lines in use. Customer impact, therefore, would be substantially over-represented by the use of "assigned numbers" measurement.

Third, toll-free numbers (8XX) are sold and assigned on residential and business lines by IXCs and other service providers. Because Local service providers, therefore, are unaware of all of the of toll-free numbers assigned to customers affected by any particular outage, many of those number assignments would not be counted.

And finally, a single access line may have as many as three telephone numbers assigned to it. This is a feature that customers use to allow a single line to serve multiple functions by assigning a distinctive ring depending on the telephone number dialed. In that scenario, "assigned numbers" would over-represent customer impact, since one line could equal up to three assigned numbers.

For these reasons, the use of "assigned telephone numbers" to define "users" is an inherently flawed measurement of customer impact and should not be the method used to determine customer impact.

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[8] Numbering Resource Optimization, CC Docket No. 99-200, *Report & Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 7574, 7585 (2000).

### 2. The Sliding-Scale Approach is Unnecessarily Complex

While, as noted, SBC agrees that smaller outages that are excessively long should be reported, the sliding-scale approach proposed by the Commission is unnecessarily complex and impracticable. Under this approach, the determination of whether an outage is reportable would depend both on the duration of the outage and the number of telephone numbers assigned to affected customers. While SBC has no problem with a rule that purports to address both the duration and scope of an outage, the myriad variations entailed in the Commission's sliding scale would render those determinations too complex. The Commission must be mindful that many carriers experience hundreds of network incidents each year. Carriers should not have to apply an algorithm to determine whether each incident is a reportable outage, particularly given the difficulty of determining the number of assigned numbers to any particular set of customers and the fact that Initial Reports are due in 120 minutes. A simpler, more easily determinable standard should be adopted.

## B. Simpler Metric Based on Lines in Service Would Achieve the Commission's Goals while Limiting Burden on Providers and Commission

Because of the flaws with its proposed metric, the Commission should adopt an alternative metric, one that is based on a different definition of users and is easier to administer. To that end, SBC proposes that the Commission define users, not with reference to assigned numbers, but, rather, with reference to lines in service. Information on the number of lines in service is readily available; it can be obtained from switch data records and downloaded in "real time." Moreover, by keying reporting requirements to the number of lines in service affected by an outage, the Commission would be able to target its reporting requirements to outages that truly are critical in terms of their impact on customers. SBC proposes further that, in lieu its proposed "sliding scale," the Commission establish a two-tiered test.

Specifically, SBC proposes the following test: Reports would be required for (1) outages affecting more than 30,000 lines in service for 30 or more minutes; or (2) outages affecting fewer than 30,000 lines in service for six or more hours.

To determine how many lines in service are affected by an outage, a simple blocked call measurement should be used. Blocked calls (and, in the absence of blocked calls, historical data) account for traffic volume during a particular time of the day or day of the week, which is a more accurate reflection of customer impact than the purely hypothetical, mathematical formula proposed by the Commission. SBC would apply the blocked call measurement to outage reporting in the following manner:

1. For those communications providers that have the ability to use blocked call counts, SBC proposes an outage be reported if it: (1) lasts for 30 or more minutes; and (2) generates 90,000[9] blocked calls based on real-time traffic data during the duration of the event;
2. If real-time blocked call data is unavailable, then a communications provider would use historical traffic data and report an outage if it: 1) lasts for 30 or more minutes; and (2) affects 30,000 calls for the duration of the outage;
3. For those communications providers that do not have the ability to identify real-time blocked call or historic traffic data, a pure "lines in service" measurement, downloaded from the switch, would be used to determine the number of users affected by the outage.

**C. The Commission Should Define "Outage"**

The fundamental problem with the current rule lies not just in the definition of "customer" as suggested by the Commission, but also in the definition of "outage." The industry views an outage essentially as a loss of service, from the customer's perspective. But the current definition focuses on "significant degradation," which is a subjective standard. Service providers' differences in the interpretation of what constitutes an "outage" lead to inconsistent reporting. Additionally it can be difficult, if not impossible, to identify significant degradation in

[9] This number takes into consideration the Commission's assumption that users will attempted to dial a number three times when a call is blocked. It, therefore, would equate to an outage of 30,000 lines in service.

some services since a channel of communications may be fully functioning for once type of service, like voice, but may not be functioning for others, such as data or video. Since a service provider is generally unaware of how a customer is using a channel of communication or group of channels at any given one time, it would not know whether the channel(s) was significantly degraded. And it is unclear from the current definition whether the Commission intended from that type of service degradation to be considered an outage.

In the *NPRM,* the Commission recognized that there are two types of communications disruptions: (1) the inability to access the network (e.g. inability to obtain dialtone); and (2) the inability to successfully complete a communication once the network has been accessed.[10] While these characterizations comport with the industry's commonly recognized understanding of an outage, the Commission did not propose a change to the definition of outage. SBC believes that a clearer definition of "outage" could assist carriers in determining which outages are reportable, thereby gaining some consistency in outage reporting. To that end, SBC proposes that the Commission define "outage" as "the total loss of the ability of end users to establish and/or maintain a channel of communication due to a failure in the service provider's network."

### D. Application of Common Metric to Infrastructure, Special Facilities, and Paging Providers

#### 1. Tandem Outages

The Commission proposes to require all blocked calls "regardless of whether they are originating or terminating calls, be counted in determining compliance with the outage reporting criteria."[11] SBC agrees that all blocked calls should be counted, but is confused by Commission's terminology. The terms 'originating' and 'terminating' are used to reference traffic from an end or remote office, whereas 'incoming' and 'outgoing' are terms reserved for classifying traffic within a tandem switch. Therefore, SBC proposes replacing the terms 'originating' and 'terminating' to 'incoming' and 'outgoing'.

[10] *Id.* at ¶19.
[11] *NPRM* at ¶34.

Since each call would be both incoming and outgoing, there would be no need to double the number of one measurement to determine the true amount of blocked calls. If a call is blocked incoming, there would no resultant switched call to generate a blocked outgoing call. So if a provider used blocked incoming calls, then it would capture all blocked calls.

SBC further agrees that if real-time, blocked call data is not available, historical call data would be an accurate measurement. When historical call data is used for a tandem application, it would be most appropriate to use the tandem peg count (traffic), either incoming or outgoing, but not both, from the same period of time on a like day since each call would be both incoming and outgoing. To combine historic incoming *and* outgoing traffic would be doubling the actual number of historic calls processed.

**2. DS3 Minutes**

Recognizing the increasing importance of data communications, the Commission proposed establishing a new outage reporting criteria for major infrastructure failures (those communication infrastructure components having significant traffic-carrying capacity).[12] Utilizing a "DS3 minutes" (similar to "user minutes") standard recommended by Pacific Telesis in 1994,[13] the Commission would require reporting of outages lasting at least 30 minutes and potentially affecting at least 1350 DS3 minutes." [14] This "DS3 minute" calculation equates to roughly 45 working DS3s and approximately 30,000 DS0 circuits, which the Commission correlates with users.

SBC agrees that only working DS3s should be counted in the metric and only those DS3 failures that are within the control of the service provider be reported. But the proposed DS3 standard is outdated. By today's standards, for an infrastructure outage to be considered "significant," it should affect the rough equivalent of an OC48. So an outage should be reported

[12] *NPRM* at ¶¶46, 47.

[13] *Id*. at fn. 104.

[14] *Id*. at ¶47.

if it: (1) affects 48 or more working DS3s, lasts for 30 or more minutes, does not switch to protect mode within a service providers network, and the service provider owns, operates and maintains the electronic terminal equipment at both end points; or (2) affects 24 or more but less than 48 working DS3's, lasts 6 or more hours, does not switch to protect mode within a service providers network, and the service provider owns, operates and maintains the electronic terminal equipment at both end points  An outage involving fewer than 24 working DS3's would not be a significant outage and should not be reported.

Additionally, the loss of 48 or more working DS3s for 30 minutes (or 24 or more working DS3s for 6 hours) on a mid-span meet[15] where a provider's infrastructure transport component failure causes an outage, should constitute a reportable outage.

**3. SS7 Outages**

The Commission also proposes to extend reporting requirements to all providers of Signaling System 7 ("SS7") service (or its equivalent) to further capture infrastructure failures. SS7 providers would be required to "report those communications disruptions of at least 30 minutes in duration for which the number is blocked of lost ISDN User Part (ISUP) messages (or its equivalent) was at least 90,000."[16]

ISUP messages, however, are not an accurate measure of SS7 failure.  And STP equipment is not and was not intended to be used in the manner of monitoring ISUP traffic as envisioned by the Commission.  The Commission stated in footnote 109 of the *NPRM* that "the 90,000 criterion for blocked ISUP messages is analogous to the criterion of 90,000 [blocked] calls [used for tandem reporting] because an ISUP message is utilized to set up each call.  ISUP messages, however, do not bear a one-to-one relationship with calls.  There can be anywhere

[15] Mid-span meet is defined as the point where two carriers have transport facilities (copper or fiber cable) that are connected for continuity of service.  Example:  Two fiber cables from two different carriers are cross-connected in a manhole between two central offices not owned by the same carrier.

[16] *NPRM* at ¶49.

from five (5) to twenty (20) ISUPs per call, so there is no direct correlation between ISUP messages and blocked calls.

Furthermore, if the Commission implements its proposed requirements, providers would have to make considerable modifications to their equipment. The substantial costs for those modifications far outweigh the perceived benefit of SS7 porting.

Finally, if the Commission's goal is to assess customer impact by tracking blocked calls, then there is no need for this additional requirement. If an SS7 failure results in an outage, as SBC has defined in these Comments,[17] then the only relevant information to be reported to the Commission would be blocked calls, which would be reportable under a different metric.

If, however, the Commission chooses to require SS7-specific reporting, the reporting requirements should be limited to SS7 signaling within a service provider's network and the service provider's scope of responsibility, defined as maintenance of the links at both end points. The reporting criteria that SBC has proposed for IXC & LEC tandem switches (i.e., 30,000 historic call data or 90,000 real-time blocked calls out for 30 or more minutes), should apply to the SS7 metric as well. And if a third party is the SS7 provider, then customer notification to the third-party SS7 provider will trigger a requirement for the third party SS7 provider to report once the outage has met or exceeded the IXC & LEC tandem reporting threshold. In addition to maintaining a consistent reporting metric, blocked calls are the most accurate gauge of an SS7 failure.

**4. Airports**

The Commission recommends extending the current reporting requirements for outages affecting major airports to apply to all airports. The FAA website currently lists a total of over 22,000 airports listed on the FAA website that are within the SBC 13-state footprint alone, and 1,987 passenger airports in the country (passenger airports don't include Cargo, Reliever and

[17] See *supra* at Section I.C.

General Aviation airports).[18] Reporting outages affecting all, even tiny, local, airports is excessively burdensome and would prove of little use to the Commission and the industry.[19] SBC agrees that communications disruption reporting requirements should be expanded beyond major airports, but cautions that it should be limited to the top 136 prime hub airports (major, medium and small), as listed on the FAA website.[20]

Further, the draft rules presented in the *NPRM* would require reporting of outages that would "potentially affect" an airport.[21] Reporting, however, should be limited to outages deemed as "air traffic impacting," in accordance with the recommendation made in NRIC VI, Focus Group 2 report. That report defines an "air traffic impacting" outage as the loss of greater than 50% of telecommunication services at a critical air traffic control facility, including airports Terminal Radar Approach Control (TRACONS) or Air Traffic Control Towers (ATCTs) or a FAA Air Route Traffic Control Center (ARTCC) that impacts the ability of the air traffic facility to control air traffic as determined by the FAA Air Traffic Supervisor at the Air Traffic Systems Command Center (ATSCC). This may include loss of critical telecommunications services that transmit radar data, flight plan data or controller-to-pilot and controller-to-controller voice.[22]

**5. 911**

In the *NPRM*, the Commission proposed revising the 911 rules by requiring reporting of all communications outages that last at least 30 minutes and potentially affect the ability to originate, complete, or terminate 911 calls successfully (including the delivery of all associated

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[18] See FAA's CY 2002 Passenger Boarding and All-Cargo Data, http://www.faa.gov/arp/planning/stats/#apttype. General Aviation airports comprise the largest single group of airports within the United States.

[19] http://www.faa.gov/atpubs/LID/A_TO_Z.htm

[20] http://www.faa.gov/arp/planning/stats/2002/CY02CommSerBoard.xls

[21] *NPRM* at Appendix A, §§4.5(c) and 4.9(f).

[22] NRIC VI Focus Group 2 final report. http://www.nric.org/fg/charter_vi/fg2/FG_2_Final_Report_ver_120103.doc , page 45 of 75.

name, identification, and location data).[23] Under current guidelines 911 outages impacting fewer than 30,000 customers require reporting only if the duration is greater than 24 hours. While SBC agrees that 24 hours may be too long, given the importance of 911 to our society, reducing the time to 30 minutes and expanding the universe of reportable 911-related events to include all Public Safety Answering Points (PSAPs) and related information, like ANI/ALI (associated name, identification, and location data), swings too radically in the opposite direction.

A more reasonable approach, which properly balances the costs and benefits of additional reporting, would lower the reporting threshold duration of PSAP outages to six continuous hours or more when the outage affects fewer than 30,000 lines served by a PSAP or aggregate of PSAPs and is caused by a failure in the providers network and subsequent failure to reroute. PSAP or aggregate of PSAPs outages that last for 30 or more continuous minutes and affects 30,000 lines served (and the outage is caused by a failure in the providers network and subsequent failure to reroute) would also be reportable outages.

The loss of all call processing capability within one or more E911 tandem/selective router for 30 or more continuous minutes would be a reportable outage as well.

And the isolation of one or more end office switches or host/remote switch clusters causing 30,000 or more subscriber lines to be isolated from a 911 PSAP or aggregate of 911 PSAPs for 30 or more continuous minutes; or the isolation of one or more end office switches or host/remote switch clusters causing fewer than 30,000 subscriber lines to be isolated from 911 PSAP or aggregate of 911 PSAPs for six (6) or more hours would be considered reportable outages.

The impairment of ALI/ANI, however, does not diminish the ability of the customer to call 911 and should not be classified as an "outage." The loss of these services does not constitute an outage by either the Commission's current definition, or the definition proposed in

[23] *NPRM* at ¶25.

these Comments.[24] The delivery of associated name, identification, and location data is not necessary to complete a 911 call, as evidenced by some wireless and most VoIP customers. The call taker still has the capability to ask for information from the caller when a call is received. Furthermore, 911 customers dictate the architecture and nature of the service to the PSAP and several have chosen not to purchase the Enhanced 911 service, which means the ALI/ANI service is not even provisioned to those PSAPs. Because 911 service is designed and sold to specific customer requirements and in many instances does not include ALI/ANI at the customer's request, reporting should essentially remain as it is without the addition of the ALI/ANI requirement.

**6. Applicability to Paging Providers**

In the *NPRM*, the Commission seeks to apply its proposed common metric to paging providers by utilizing "potentially affected assigned telephone numbers" as the reporting metric. The Commission must understand, though, that while all of an SBC paging company's customers can theoretically access any transmitter in the system, only a relative few customers are in the vicinity of a given transmitter at any moment in time and are affected by an outage. Therefore, the recommended metric of "potentially affected" end users could, at any time, be extremely over-inclusive (i.e. every subscriber, since theoretically every subscriber could potentially be affected by an outage), or extremely under-inclusive (i.e. only those that the provider has positively identified as in the vicinity). The Commission must factor this dynamic into its triggering criteria for paging reporting requirements, either by providing a reasonable formula for calculating "potentially-affected assigned telephone numbers,"[25] or by requiring paging service providers to report only those outages that constitute a system failure (i.e. a switch outage or satellite loss).

[24] See *supra* at Sections I.B.&I.C.

[25] *Id*. at ¶36.

The Commission recognized that while a common metric across all platforms would generally provide the optimal environment for consistent reporting, different technologies could necessitate different reporting requirements.[26] Given their unique network, the need for different reporting requirement applies to paging companies. An appropriate initial requirement for paging companies at this stage would be an annual outage report that would include system failures experienced during the reporting period, the causes of those failures, and the possible methods to avoid those in the future.

The Commission should also consider allowing the ILORI to continue development and implementation of voluntary disruption reporting methods & procedures, as recommended to the Commission in the NRIC VI Focus Group 2 report in December, 2003. Wireless participation in ILORI has improved since release of that report and this *NPRM*. Continuing this initiative for a period of time will give paging providers the opportunity to continue to increase participation in the ILORI, which may well yield "best practices" for paging companies in much the same way it has for wireline carriers.

## III. REPORTING PROCESSES, ELECTRONIC REPORT FILING, AND OUTAGE REPORT DATABASES SHOULD PROMOTE ACCURATE, TIMELY REPORTING AND CANDID INFORMATION SHARING

### A. Initial Report

Under the Commission's existing rules, carriers must file an initial report of outages affecting more than 50,000 customers within 120 minutes of the carrier's first knowledge of the outage. Initial reports of outages affecting between 30,00 and 50,000 customers must be filed within three days of when the carrier first becomes aware of the outage. The Initial Report must identify a contact person, a telephone number at which (s)he can be reached, and provide information known at the time about the outage. In the NPRM, the Commission proposes to

[26] *Id.* at ¶13.

require that *all* reportable outages be reported within 120 minutes of becoming reportable.[27] The Commission proposes a template to be used for all outage reports, including Initial Reports, and theorizes that "the ability to file initial reports electronically (*e.g.,* over the Internet), coupled with the "fill in the blank" template that we are proposing in this Notice, should make it possible for communications providers to notify us more promptly, and more easily, when communications disruptions arise."[28] The Commission theorizes that this alternative reporting requirement "will facilitate more rapid action in the event of a serious crisis, and will also facilitate more rapid, more coherent, and more accurate responses when multiple outages are occurring during simultaneous (or virtually coincident) crises."[29]

SBC agrees the Commission should be informed as quickly as possible of major outages, particularly given the threat of terrorist attacks. SBC further agrees that electronic filing options and streamlined requirements could reduce the burden associated with outage reporting. SBC does not agree, however, that it would be useful or appropriate to require carriers to amass and produce within 120 minutes all of the information required in the Commission's proposed template. Particularly in the event of a major outage, carriers will be scrambling to identify the scope and causes of the outage and to restore service as quickly as they possibly can. Requiring them to divert resources to fill out detailed forms for filing with the FCC would be enormously counterproductive. Indeed, it is highly questionable that carriers *could* obtain the information necessary to complete the form in such a short timeframe, particularly in the event of a major outage. It is simply unreasonable to expect carriers to identify within 120 minutes the causes of an incident, the steps taken to restore service, whether best practices were followed, etc. It is all the more unreasonable to require this information under attestation.

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[27] The Commission proposes that Final Reports be submitted 30 days after the Initial Report This is largely consistent with the existing rule, which requires that Final Reports be submitted within 30 days of initial knowledge of the outage.

[28] *Id.* at ¶ 30.

[29] *Id.* at ¶31

A better proposal would be one that balances the Commission's need for timely reporting with carriers' needs to focus their initial efforts on restoring service and to have sufficient time to provide complete and accurate responses. To that end, SBC proposes a two step process for initial reports:

(1) Within 120 minutes of a provider's knowledge of an outage, a provider must notify the Commission via e-mail, facsimile, or telephone of the outage. Because of the difficulty of determining within such a short time frame whether the outage is reportable, carriers should have a reasonable opportunity subsequently to withdraw the notification if they determine that the outage was not, in fact, reportable.

(2) Within 72 hours of the outage, providers would be required to submit an Initial Report. The report would provide additional available information, such as the extent of the incident, its impact, any known causes, and how it was resolved. Attestation should not be required at this juncture.

**B. Final Report Contents**

SBC agrees that final reports should be due 30 days after the outage. Moreover, subject to the caveats below, SBC does not oppose the use of Commission's proposed template for final reports. SBC does have some concerns, however, with certain aspects of this template. Among the information required by the template are:

- A statement as to whether the reported outage was at least partially caused because the network did not follow engineering standards for full diversity (redundancy); and
- A statement of all of the causes of the outage. [30]

**1. Diversity**

Although SBC agrees that a standard operating procedure during preparation of the Final report should be reviewing NRIC Best Practices, including those regarding diversity and redundancy, SBC does not support a requirement to make a separate statement in the Final

[30] *Id.*. at ¶31.

Report about whether the network followed "engineering standards for full diversity." In a competitive communications service provider environment, decisions to deploy diversity are often based on business continuity and risk assessments made by a carrier (or customer) and sometimes the best, most cost-effective decision is not to deploy a completely diverse, redundant network. Furthermore, diversity comes at a price and lack of cost-effectiveness has historically prevented route diversity in many rural offices and smaller carrier networks. And in most instances, a separate reporting requirement addressing diversity will provide little insight to the Commission and industry and will merely result in duplicative efforts and information.

**2. Causes of Outages**

The final report should include a statement of all of the causes of the outage, as proposed by the Commission, since multiple factors may contribute to an outage. The Commission, however, takes issue with the current rule which requires that the final report identify the "root cause."[31] Stating that "experience in administering this part of our rules has convinced us that there may be more than one root cause[,]" the Commission seeks to require that all causes be reported. SBC agrees that the verbiage in the reports and/or reporting forms should be changed to indicate that there may be multiple contributing causes to an outage, but the reports should still identify a single "root cause."

**C. Electronic Filing and Outage Report Database**

SBC supports the Commission's vision of a streamlined, electronic filing process, but proposes that this process accommodate at least two types of filings: a "data entered but not submitted" category, to correspond with the 120 minute notice requirement, and a second, "data submitted" category, to correspond with the SBC-proposed 72 hour initial report. Even if the Commission does not require that all of the information provided for in its template be submitted within 120 minutes of a reportable outage, it still will be difficult for carriers to validate any information they do provide in such short order. Allowing carriers to make this information

[31] 47 C.F.R. § 63.100(h) (1).

available to the Commission without formally submitting it would encourage carriers to provide as much information as possible with these initial filings and formalize the Commission's recognition that validation of that information may take additional time.

Under the auspices of the ILORI, a web-based computer program was developed and turned up in March 2004 for service providers across all platforms – wireline, wireless, satellite, cable, data, ISP, DSL, etc. – to voluntarily report service disruptions. SBC supports the continuation of this effort, but recommends that the web-based program reside in an unbiased third-party server rather than a communications vendor's server, as currently utilized by ILORI, or on a public server, as recommended by the Commission.

In this proposed third-party database environment, regulatory bodies such as the FCC, the National Coordinating Center, and state and municipal regulators would be able to access the information through a secure (i.e. password-protected) interface. In addition, equipment suppliers could access to data that specifically involves any of their products.

Placing raw service disruption report data under the control of a public or private communications provider does not adequately protect critical infrastructure information and confidential corporate information.[32] This lack of protection will ultimately inhibit providers from submitting comprehensive useful reports and raises the risk that information can be misused. A better database administrator would be a third party, that is not in the communications industry and has been audited and certified as meeting stringent standards for information security.

### D. Substantive Changes to the Outage Reporting Template Must Be Made Only Through Notice and Rulemaking Procedure

The Commission proposes to delegate authority to the Chief of the Office of Engineering and Technology to make revisions to the filing system and template.[33] According to the

[32] Because the much of the information contained in outage report is proprietary, carriers should not be required to provide it to competitors.

[33] *Id* .at ¶51, proposed section 0.241 (a)(1) of the Commission's rules.

Commission, modifications to the template may be necessary to maximize reporting efficiency and minimize the providers' time to prepare, and the Commission staff's time to review, outage reports.

While SBC agrees with these goals, it urges the Commission to clarify that the delegation of authority is limited only to non-substantive changes to the template or filing system. Those would include: make editorial changes, including correcting misspellings and web coding, moving data fields, changing Commission contact information or filing instructions. SBC recommends that before making such changes to the template, the Chief of the Office of Engineering and Technology should submit those changes to a forum such as NRIC, for review and should give great weight to its recommendations.

Because any changes to the outage reporting process or template may require communications providers to modify their internal reporting processes and re-educate their personnel on the new procedures, especially those personnel that will be attesting to the completeness of the reports. SBC recommends that the Commission provide no less than 120 days between the announcement of a non-substantive change to the template and its implementation.

## IV. THE COMMISSION SHOULD ENCOURAGE DEVELOPMENT OF BEST PRACTICES THROUGH VOLUNTARY COLLABORATION IN A SECURE, NON-PUBLIC ENVIRONMENT

In its *NPRM* the Commission placed great weight on the Best Practices established in the communications industry since the Telecommunications Act of 1996. SBC believes that industry groups, such as the Network Reliability Steering Committee ("NRSC"), the Network Reliability and Interoperability Councils ("NRIC") V and VI, and the Industry-Led Outage Reporting Initiative ("ILORI") (formed at the recommendation of NRIC VI, Focus Group 2), through the cooperative efforts of competing carriers, have been crucial in shaping industry-wide Best Practices that contribute to the highly reliable wireline networks in place today. The Commission, however, counterfactually assumes that the development of Best Practices, which led to many improvements in the networks, "would likely not have been possible or so successful

if service disruption reporting had not been mandatory and if those reports had not been available to communications providers, manufacturers, and the public."[34] The relationship between Commission-mandated outage reports and the development of the existing approximately 750 NRIC industry Best Practices is misstated in this *NPRM*, as fewer than 5% of existing Best Practices can be attributed to knowledge gained from these outage reports.

Additionally, while the reports did foster discussion between and among providers and manufacturers, it was neither the mandatory nature of the reports, nor the availability to the public, that led to the development of Best Practices. The vast majority of Best Practices were derived either from insights gained through individual companies sharing their experiences or, since September 11, 2001, from providers proactively addressing communications infrastructure vulnerabilities. These industry-wide Best Practices were obtainable only through voluntary, collaborative efforts between competing carriers and competing manufacturers.

The Commission recognized this fact by stating, "[]this network outage reporting requirement has enabled a successful public-private partnership to emerge in which the telephone industry and manufacturers have voluntarily developed best practices that telephone companies have been encouraged, but have not been required, to adopt."[35] Cooperation between public and private sectors in the development of best practices has been obtainable only because of the assumption that NRIC best practices would not be mandated by a regulatory entity. If a regulatory entity mandates best practices, then involvement by industry will be diluted. Best Practices should be developed through the Commission-chartered NRIC. Industry experts sharing best practices used in their individual companies have been and should continue to be the venue for identifying new recommended Best Practices and evaluation of the efficiency of effectiveness of existing recommended NRIC best practices.

[34] *Id.* at ¶10.

[35] *Id*. at ¶7.

### A. Public Access to Reports

In the *NPRM*, the Commission states that public access to outage reports has resulted in "significant benefits" by enabling service providers and manufacturers, to learn from each other's outage experiences.[36] SBC does not agree. It is not public access, but cooperative analysis of the data and studies performed in the NRSC that have led to a greater understanding of network reliability issues and the development of Best Practices. Moreover, there are significant risks associated with public access. Most significantly, there is the risk that critical infrastructure information could fall into the wrong hands. It is this precise risk that led to the Commission's removal of outage reports from its website soon after September 11, 2001. The very information necessary for an effective database, a useful tool in generating and sharing industry best practices, could, if publicly available, be used to determine network vulnerabilities such as key facility locations or failure modes that have caused widespread communications disruptions. In the wrong hands, this information could place vital communications networks at risk. While SBC does not advocate hiding relevant information from the public, it firmly believes that frank, open discussions between carriers leading to improvements in the network serves the public needs better than access to information that most will find difficult to understand, while others may use for nefarious purposes.

Public access to the reports also could result in other forms of mischief. For example, a start-up company has used the Commission outage reports from a publicly available website to develop advertising that stated their network reliability was better that the local phone company, even though the start-up company was not reporting any outages to the Commission because the number of customers the start-up company served fell below the Section 63.100 reporting thresholds. These types of incomplete, inaccurate statements lead to consumer confusion and discourages full disclosure by carriers issuing the reports.

[36] *Id.* at ¶10.

Processes exist to enable communications providers and manufacturers to learn from outages without making critical infrastructure information available to the public. Communications providers work with manufacturers on root cause analysis of equipment failures. The NRSC conducts in-depth analysis on all outage reports. When analysis indicates a specific area needs attention, the NRSC initiates special studies to look at causes and determine whether existing Best Practices are adequate and, if not, develops new Best Practices. The special studies and Best Practices are available to the public and private sectors. The NRSC analysis results should be promoted and awareness of its effectiveness widely communicated.

## V. CONCLUSION

For the foregoing reasons, the Commission should adopt the recommendations stated herein.

Respectfully Submitted,

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